

AMENDMENTS TO THE SPECIFICATION

Please replace the fourth full paragraph of page 5 with the following amended paragraph:

The unit 1 further comprises ~~speech~~ recognition means 8, which receive a vocal message 9 emitted by a person 7 and send signals 10 at the output which are received by the microprocessor 3.

Please replace the fourth full paragraph of page 6 through the first full paragraph of page 7 with the following amended paragraphs:

The ~~speech~~ recognition means 8, which comprise an audio circuit board connected to a microphone, are able to convert, in a way known per se, a PCM (Pulse Code Modulation) digital audio signal coming from the board into a respective graphic of the amplitudes of the frequency components. With the ~~speech~~ recognition means 8 there is also associated a second database (for instance codified in a suitable area of the memory means 5) containing several thousands of sample graphics, which identify different types of sounds which can be produced by the human voice. Actually, the sound entering into the system is identified by correlating it to the type of pre-recorded sound which is most close to that under examination.

Therefore, in practice, when the microphone perceives sound waves, the latter are processed by the ~~speech~~ recognition means 8, which attend to selecting and codifying the useful sounds. The corresponding codes are sent to the stimuli generators 11, which convert said codes into electric signals which stimulate the nervous fibres of the animal. These signals travel

until they reach the auditive cortex of the animal brain, where they are recognised as being sounds.

Speech-Voeeal recognition systems, well known per se, must be adapted to the voice of the user and to his way of speaking, in order to increase accuracy of operation. These features are just ensured by using a neural network architecture.

Please replace the third full paragraph of page 7 with the following amended paragraph:

Also in the case of the present invention a "training" period is provided for the system, in order to reach a proper configuration of the neural network, which is necessary for the proper operation of the speech-voeel recognition system.

Please replace the first full paragraph of page 8 with the following amended paragraph:

With reference to the second aspect, a number of basic words and phrases are recorded in the memory means 5 of the microprocessor 3, by means of the speech-voeel recognition means 8. The vocalization of these words/phrases is associated to specific actions which the dog must take and their emission is controlled by the human 7, which also in this case acts as supervisor or trainer, through the neural network implemented in the control logic of the system. The algorithms of the neural network will produce the best relation between the vocal input provided by the human 7 and the output of the stimuli generators 11.

Please replace the third full paragraph of page 8 with the following amended paragraph:

the input from-human-to-animal communication is constituted by vocal instructions coming from the human 7, detected by the speech recognition means 8, while the output is provided by the stimuli generated by generators 11,

Please replace the second paragraph of page 9 with the following amended paragraph:

According to an important feature of the invention, the provision of the neural network control system and the speech recognition system 8 enables the microprocessor 3 to activate a self-learning logic in which the human 7 can correct or confirm by his vocal messages the vocal messages which the loudspeaker 6 emits on the basis of signals 4.

Please replace the paragraph bridging pages 9 and 10 with the following amended paragraph:

For instance, in a possible embodiment of the invention, the signal which reaches the speech recognition means 8, coming from the human, and the signal detected by the sensors 2, coming from the animal, interact in the neural network, in order to generate an answer or a stimulus which varies depending upon the interaction between the instructions from the human and the mental status of the animal.